513 · 515 · 517 · 519 · 521

Audio Signal IN → Block Quantizing → Filter → Non-Linear Quantizer → Calculate Signal Increases

511

525

Add → To Audio Signal Out

523

FIG. 1 – Addition of Anti-Compression Components to Signal

529 · 531 · 527

Relative Level — Time

FIG. 2 – Audio Signal IN

533 · 535 MASK · 539 SIGNAL BLOCK SPECTRUM

539 · 539

Relative Level (dB)

537 · 537 · 537

4k · 8k · 12k · 16k — Frequency (Hz)
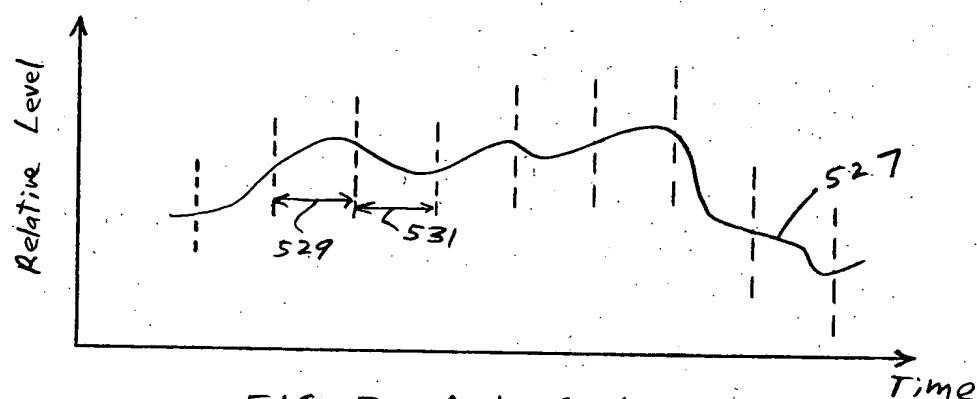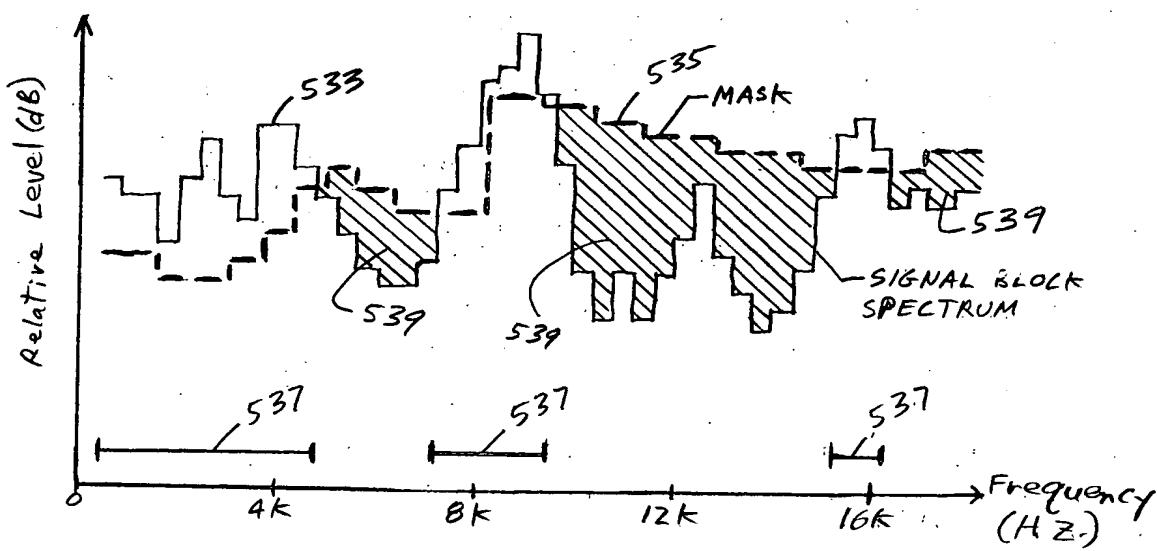
FIG. 3 – Block Spectra & Mask of Audio Signal IN

22-144 200 SHEETS

0060 2E V2 0506 00
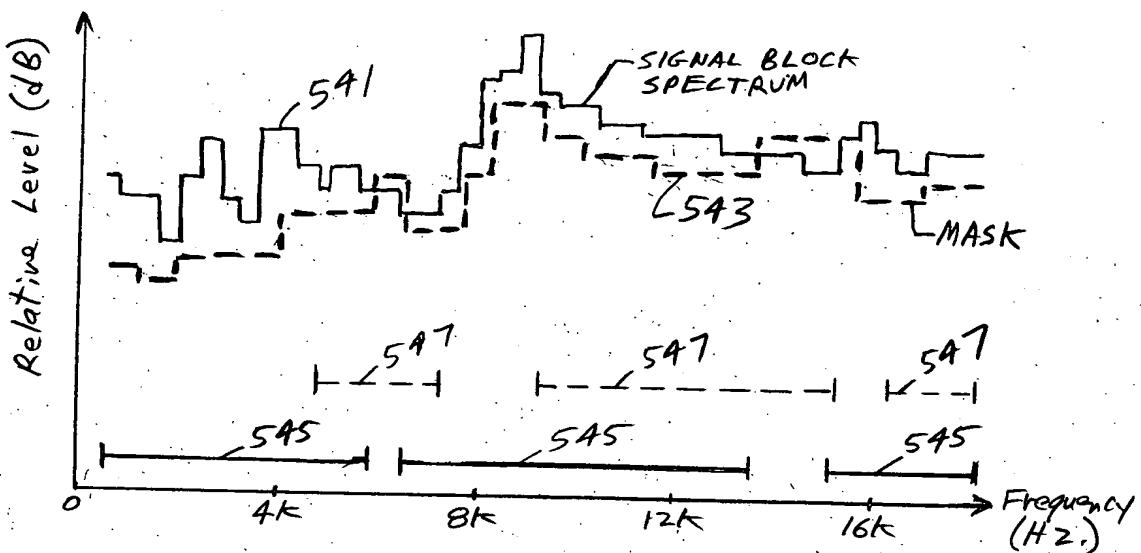
FIG. 4 – Block Spectra + Mask of Audio Signal OUT

- 541
- SIGNAL BLOCK SPECTRUM
- 543
- MASK
- 547
- 545

Relative Level (dB)

Frequency (Hz.)

0   4k   8k   12k   16k

Master Audio Source — 551

Anti-Compression Signal Additions — 511
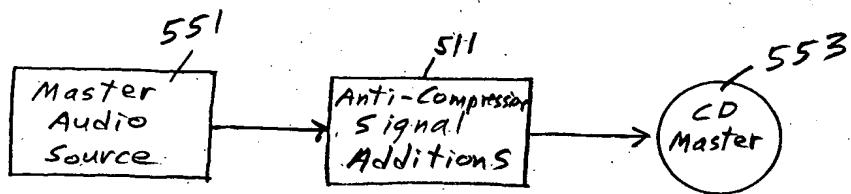
CD Master — 553

FIG. 5 – Making CD Master with Anti-Compression Signal Components

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Master Audio Source — 555

Compress — 557

Encode — 559

Deliver to User (Internet) — 561
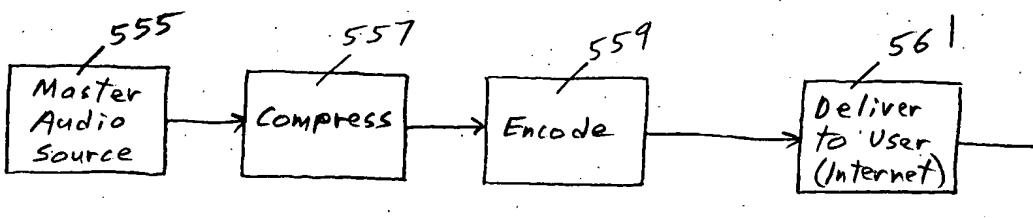
FIG. 6 – Adding Anti-compression signal components to decompressed audio

Decode — 565

Decompress — 567

Add Anti-Compression Signal Components — 569

115' SEALED MODULE

Audio Signal Utilization — 571

KEY CARD

Anti-Compression
Signal Component
Addition Software — 573

145 —— BOOT ROM | FLASH ROM

Encoded
Compressed
Audio IN —— 147'

143 —— SRAM

141 —— DSP

—— 115'   —— 135'

Audio OUT
(with anti-compression
signal components added)
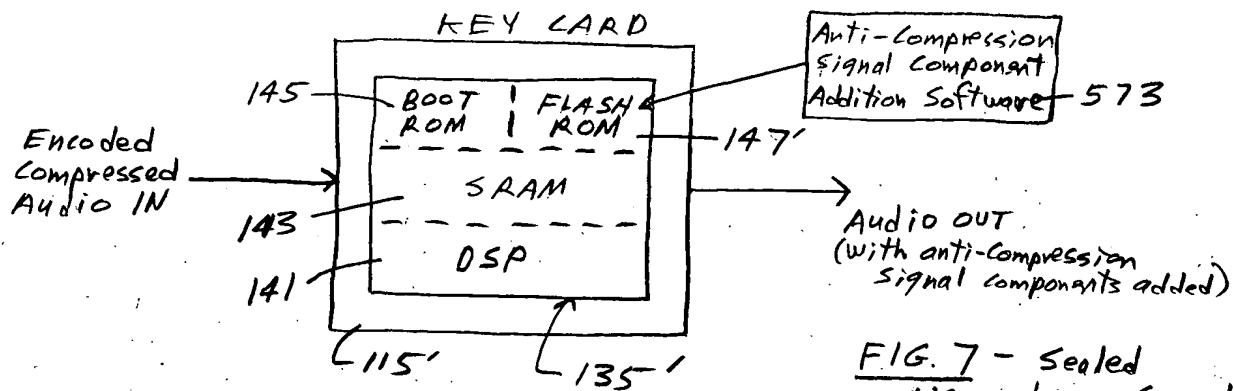
FIG. 7 - Sealed
User Key Card

577
Master
Audio
Source

579
Compress

581
Anti-Compression
Signal Data
Addition

Compressed Audio OUT
(with anti-compression noise)
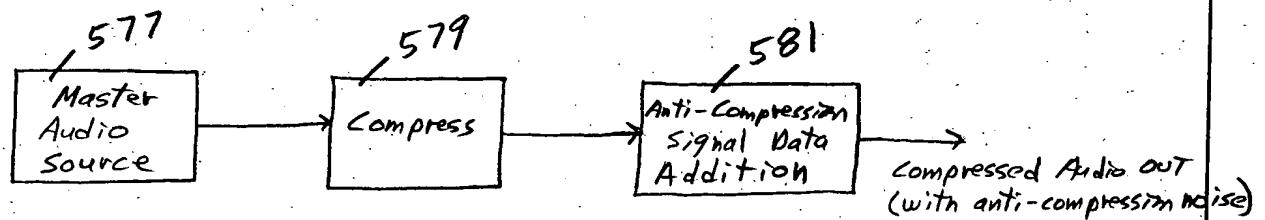
FIG. 8 - Adding Anti-Compression Signal
Components as part of a Compressing Process

Audio Ch# 1 IN
617

583 Filter Bank

585 Analysis of Frequency Component Activity

Spurious Signal Generator
587

589 Audio Signal Modify

Audio Ch# 1 OUT
591

617

623

593 Add

613

619

611 Ch#1/ Ch#2 Signal Relationship Analysis

609

605

605

625

603 Filter Bank

601 Analysis of Frequency Component Activity

599 Spurious Signal Generator

595 Add

615

597 Audio Signal Modify

621

Audio Ch# 2 IN

Audio Ch# 2 OUT

Fig 9 - Optimization Of Anti-Compression Processing